

In the Claims

- 1 1. (Amended) A method of communicating over a plurality of different target media,
2 comprising:
- 3 providing, for each of the plurality of different target ~~busses~~media, a plurality of
4 communication element types, each communication element type being a user-definable
5 data structure structured to that pertains to represent a particular protocol layer a-of the
6 respective target ~~communication~~ medium,
- 7 wherein at least one of the plurality of communication element types is included
8 by reference in greater than one other of the plurality of communication element types.
- 1 2. (Original) A method as recited in claim 1, wherein instances of each communication
2 element type can be created for exchanging data on the respective target medium.
- 1 3. (Original) A method as recited in claim 1, further comprising defining the plurality of
2 communication element types responsive to exchanges allowed by the protocol of the
3 respective target medium.
- 1 4. (Original) A method as recited in claim 1, further comprising:
2 creating an instance of at least one of the plurality of communication element
3 types; and
4 processing the instance of the communication element type for exchanging
5 information on the respective target medium.
- 1 5. (Original) A method as recited in claim 1, wherein the communication element type
2 defines a structure for transmitting data over the target medium.
- 1 6. (Original) A method as recited in claim 1, wherein the communication element type
2 defines a structure for receiving data over the target medium.

- 1 7. (Original) A method as recited in claim 1, wherein at least one communication
2 element type is a message type that includes a portion for holding message data
3 associated with instances of the respective message type.
- 1 8. (Original) A method as recited in claim 7, wherein the message data has a fixed
2 length.
- 1 9. (Original) A method as recited in claim 7, wherein the message data has a variable
2 length.
- 1 10. (Original) A method as recited in claim 1, wherein the communication element type
2 has a fixed portion that is the same for all instances of the communication element type.
- 1 11. (Original) A method as recited in claim 1, wherein any communication element type
2 can be defined in terms of other communication element types.
- 1 12. (Original) A method as recited in claim 1, wherein the plurality of communication
2 element types includes at least one message type, and each instance of the message type
3 includes a portion for prescribing timing.
- 1 13. (Original) A method as recited in claim 12 wherein the timing includes a setting for
2 specifying a pre-message gap.
- 1 14. (Original) A method as recited in claim 12, wherein the timing includes a setting for
2 specifying a pre-word gap.
- 1 15. (Original) A method as recited in claim 12, wherein the timing includes a setting for
2 specifying a begin message timeout.

1 16. (Original) A method as recited in claim 12, wherein the timing includes a setting for
2 specifying a trailing gap.

1 17. (Amended) A method of structuring communications over a communication
2 medium having a known protocol, comprising:

3 providing at least one user-definable communication element type for at least one
4 layer of a generalized communication model, each communication element type having a
5 user-definable structure that is adaptable for representing pertains to a corresponding
6 layer of the protocol;

7 creating an instance of the at least one user-definable communication element
8 type; and

9 varying at least one characteristic of the instance to determine a susceptibility of
10 equipment operatively connected to the target medium to the varied characteristic.

1 18. (Amended) A method as recited in claim 17, wherein the at least one
2 characteristic includes a timing characteristicspecific instances of the communication
3 element types can be created for representing transactions over the medium.

1 19. (Amended) A method of creating an interface with a communication medium
2 having a protocol, comprising:

3 creating at least one a plurality of user-definable communication element types for
4 representing different at least one layers of a generalized communication model, wherein
5 at least one of the plurality of communication element types is included by reference in
6 greater than one other of the plurality of communication element types;

7 structuring each at least one user-definable communication element type to
8 substantially represent the protocol of the medium at the respective layer of the
9 generalized communication model; and

10 saving the at least one user-definable communication element type in a computer
11 readable format that can be accessed for communicating over the medium; and

12 instantiating one or more of the plurality of communication element types to
13 create specific instances of communications over the communication medium.

1 20. (New) A method as recited in claim 1,
2 wherein the plurality of user-definable communication element types include
3 message types, word types, and field types,
4 wherein at least one message type includes a reference to at least one word type,
5 and
6 wherein at least one word type includes a reference to at least one field type.